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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,253

08/02/2006

Risto Huhta-Koivisto

502.1271USN

5765

33369 7590 06/08/2009
FASTH LAW OFFICES (ROLF FASTH)
26 PINECREST PLAZA, SUITE 2
SOUTHERN PINES, NC 28387-4301

EXAMINER

BUSHEY, CHARLES S

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

06/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,253	Applicant(s) HUHTA-KOIVISTO ET AL.	
	Examiner Scott Bushey	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-11, 13-17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 5, 12 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-7-06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10, 11, and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Apparatus claims 10 and 11 recite only process steps of making the apparatus without further limiting the apparatus structurally. Similarly, apparatus claims 14 and 16 recite only process steps drawn to a method of using the apparatus without further limiting the apparatus structurally. While, apparatus claims may recite process steps without being indefinite simply in view of such recitations, they cannot rely upon those process recitations for patentability of the apparatus claims when the structure of the apparatus is not further limited by the process language.

With regard to the recitations of instant claims 11 and 15, it is unclear as to what applicant intends to claim as the invention. Also, in claim 15, "the transversal suction pipe", "the bottom" and "the suction holes" each lack antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 7, 10, 11, 17, and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hammerly (Fig. 2).

Applicant should note that with respect to instant claims 10 and 11, the method steps for making the apparatus have not been accorded patentable weight, since the limitations set forth by the claims do not structure define the apparatus over the apparatus as taught by Hammerly.

5. Claims 1, 3, 4, 6, 7, 10, 11, 17, and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ravitts et al '729 (Fig. 10).

Applicant should note that with respect to instant claims 10 and 11, the method steps for making the apparatus have not been accorded patentable weight, since the limitations set forth by the claims do not structure define the apparatus over the apparatus as taught by Ravitts et al '729.

6. Claims 1, 2, 4, 7, 8, 10, 11, 14, and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tanabe et al (Figs. 3A and 3B).

Applicant should note that with respect to instant claims 10 and 11, the method steps for making the apparatus have not been accorded patentable weight, since the limitations set forth by the claims do not structure define the apparatus over the apparatus as taught by Tanabe et al. Furthermore, with regard to instant claim 14, the adjustability of the height of the screw shaft and element (17), which defines the cross-sectional area of the outlet of the annular nozzle, clearly defines the capability of the apparatus to meet the limitations of the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Hammerly, Ravitts et al '729, or Tanabe et al, as applied alternatively to claim 1 above, and further in view of Arnold et al.

Hammerly, Ravitts et al '729, or Tanabe et al, as applied alternatively to claim 1 above each substantially disclose applicant's invention as recited by instant claim 9, except for the multiple nozzles formed by the nozzle rings.

Arnold et al (Abstract; Fig. 1) disclose multiple stacked nozzle rings forming multiple stacked nozzles to allow for the formation of plural horizontally and radially directed sprays. It would have been obvious for an artisan at the time of the invention,

Art Unit: 1797

to modify the feed pipe construction of any one of the alternative primary reference apparati, to include multiple outlet nozzles, in view of Arnold et al, since such would allow for the processing of a larger liquid volume per unit time, thus providing more aerated product stream during a given time frame.

10. Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Hammerly, Ravitts et al '729, or Tanabe et al, as applied alternatively to claim 1 above, and further in view of Pease.

Hammerly, Ravitts et al '729, or Tanabe et al, as applied alternatively to claim 1 above each substantially disclose applicant's invention as recited by instant claims 9 and 13, except for the multiple nozzles formed by the nozzle rings, as recited by instant claim 9, and the multiple aerators being fed simultaneously by a single pipe, pump and motor, as recited by instant claim 13.

Pease (Fig. 1) disclose an apparatus similar to that of each of the alternative primary references, wherein multiple stacked nozzles are provided with liquid from a single pump and drive motor through a single feed pipe. It would have been obvious for an artisan at the time of the invention, to modify the feed pipe construction of any one of the alternative primary reference apparati, to include multiple outlet nozzles, in view of Pease, since such would allow for the processing of a larger liquid volume per unit time, thus providing more aerated product stream during a given time frame.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of Hammerly, Ravitts et al '729, or Tanabe et al, as applied alternatively to claim 1 above, and further in view of Haegeman '154.

Hammerly, Ravitts et al '729, or Tanabe et al, as applied alternatively to claim 1 above each substantially disclose applicant's invention as recited by instant claim 16, except for the specific recitation that the impeller is reversible to allow for the submersion of the nozzle outlets for intense mixing of the liquid and cleaning of the apparatus.

Haegeman '154 (Figs. 2 and 3) discloses an apparatus similar to any one of the alternative primary references, wherein the impeller within the feed pipe is reversible so as to allow for mixing or aerating by the same apparatus, the mixing scheme providing for submerged outlet nozzles wherein the liquid flow through the device causes intense turbulence and cleaning of the apparatus.

Allowable Subject Matter

12. Claims 5, 12, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claim 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 1797

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is 571 272-1153. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Scott Bushey
Primary Examiner
Art Unit 1797

/S. B./
6-6-09

/Scott Bushey/
Primary Examiner, Art Unit 1797